

Amendments to the Claims

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of claims:

1. (currently amended) A system for selecting and controlling ~~electromechanical~~ **electrically actuated** valves to operate in at least a cylinder of an internal combustion engine, the system comprising:

a cylinder head of said cylinder having at least two regions, each region having an ~~electromechanical~~ **electrically actuated** valve; and

a controller to select a valve operating mode, based on an operating condition of at least an ~~electro-magnetically~~ **electrically** actuated valve, wherein said operating mode selects at least an intake valve of said cylinder located in at least one region of said first and second region, and to operate said selected intake valve, without operating a non-selected intake valve, during a cycle of said cylinder, and to operate said non-selected intake valve during a subsequent cycle of said cylinder, without operating said selected intake valve.

2. (currently amended) The system of Claim 1 wherein said cylinder head of said cylinder has four regions, each region having an ~~electromechanical~~ **electrically actuated** valve.

3. (currently amended) The system of Claim 2 wherein said cylinder has two ~~electromechanical~~ **electrically actuated** exhaust valves operating in said third and fourth regions.

4. (currently amended) The system of Claim 1 wherein said cylinder head of said cylinder has five regions, each region having an ~~electromechanical~~ **electrically actuated** valve.

5. (currently amended) The system of Claim 1 wherein said cylinder head of said cylinder has three regions, each region having an ~~electromechanical~~ **electrically actuated** valve.

6. (currently amended) A system for selecting and controlling ~~electromechanical~~ **electrically actuated** valves to operate in at least a cylinder of an internal combustion engine, the system comprising:

a cylinder head of said cylinder having at least two regions, each region having an ~~electromechanical~~ **electrically actuated** valve; and

a controller to select a valve operating mode, based on an operating condition of at least an ~~electro-magnetically~~ **electrically** actuated valve, wherein said operating mode selects at least an exhaust valve of said cylinder located in at least one region of said first and second region, and to operate said selected exhaust valve, without operating a non-selected exhaust valve, during a cycle of said cylinder, and to operate said non-selected exhaust valve during a subsequent cycle of said cylinder, without operating said selected exhaust valve.

7. (currently amended) The system of Claim 6 wherein said cylinder head of said cylinder has four regions, each region having an ~~electromechanical~~ **electrically actuated** valve.

8. (currently amended) The system of Claim 7 wherein said cylinder has two ~~electromechanical~~ **electrically actuated** intake valves operating in said first and second regions.

9. (currently amended) The system of Claim 6 wherein said cylinder head of said cylinder has three regions, each region having an ~~electromechanical~~ **electrically actuated** valve.

10. (currently amended) The system of Claim 6 wherein said cylinder head of said cylinder has five regions, each region having an ~~electromechanical~~ **electrically actuated** valve.

11. (currently amended) A system for selecting and controlling ~~electromechanical~~ **electrically actuated** valves to operate in at least a cylinder of an internal combustion engine, the system comprising:

a cylinder head of said cylinder having at least four regions, each region having an ~~electromechanical~~ **electrically actuated** valve; and

a controller to select a valve operating mode, based on an operating condition of at least an ~~electro-magnetically~~ **electrically** actuated valve, wherein said operating mode selects at least an intake valve of said cylinder located in at least one region of said first and second region, and to operate said selected intake valve, without operating a non-selected intake valve, during a cycle of said cylinder, and to operate said non-selected intake valve during a subsequent cycle of said cylinder, without operating said selected intake valve, and to select at least an exhaust valve of said cylinder located in at least one region of said third and fourth region, and to operate said selected exhaust valve, without operating a non-selected exhaust valve, during a cycle of said cylinder, and to operate said non-selected exhaust valve during a subsequent cycle of said cylinder, without operating said selected exhaust valve.

12. (original) The system of Claim 11 wherein said selected intake valve and said selected exhaust valve lie in regions having adjacent sides.

13. (original) The system of Claim 11 wherein said selected intake valve and said selected exhaust valve lie in regions having nonadjacent sides.

14. (currently amended) A method to control ~~electromechanical~~ **electrically actuated** valves in an internal combustion engine, the method comprising:

during engine operation, operating a first and a second ~~electromagnetic~~ **electrically actuated** intake valve in a cylinder of said engine, during a cycle of said cylinder during on a first set of ~~electromechanical~~ **electrically actuated** valve operating conditions; and

operating said first intake valve without operating said second intake valve during a cycle of said cylinder, and operating said second intake valve without operating said first intake valve, during a subsequent cycle of said cylinder, during a second set of ~~electromechanical~~ **electrically actuated** valve operating conditions.

15. (currently amended) A system for selecting and controlling ~~electromechanical~~ **electrically actuated** valves to operate in at least a cylinder of an internal combustion engine, the system comprising:

a cylinder head of said cylinder having at least two regions, each region having an ~~electromechanical~~ **electrically actuated** valve; and

a controller to select a valve operating mode, based on an operating condition of at least an ~~electro-magnetically~~ **electrically** actuated valve and an operating condition of said engine, wherein said operating mode selects at least an exhaust valve of said cylinder located in at least one region of said first and second region, and to operate said selected exhaust valve, without operating a non-selected exhaust valve, during a cycle of said cylinder, and to operate said non-selected exhaust valve during a subsequent cycle of said cylinder, without operating said selected exhaust valve.

16. (currently amended) The system of Claim 15 wherein said cylinder head of said cylinder has four regions, each region having an ~~electromechanical~~ **electrically actuated** valve.

17. (currently amended) The system of Claim 16 wherein said cylinder has two ~~electromechanical~~ **electrically actuated** exhaust valves operating in said third and fourth regions.

18. (original) The system of Claim 15 wherein said engine operating condition is a temperature of said engine.

19. (original) The system of Claim 15 wherein said engine operating conditions is a temperature of a catalyst.

20. (original) The system of Claim 15 wherein said engine operating condition is an amount of oxidant storage capacity of a catalyst.

21. (original) The system of Claim 15 wherein said engine operating condition is an amount of oxidants stored in a catalyst.

22. (currently amended) A computer readable storage medium having stored data representing instructions executable by a computer to control an internal combustion engine of a vehicle, said storage medium comprising:

instructions to select a valve operating mode, based on an operating condition of at least an ~~electro-magnetically~~ electrically actuated valve, wherein said operating mode selects at least an intake valve of said cylinder located in at least one region of said first and second region, and to operate said selected intake valve, without operating a non-selected intake valve, during a cycle of said cylinder, and to operate said non-selected intake valve during a subsequent cycle of said cylinder, without operating said selected intake valve.